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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,134	10/20/2000	Kia Silverbrook	ART82US	7841

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SILVERBROOK RESEARCH PTY LTD  
393 DARLING STREET  
BALMAIN, 2041  
AUSTRALIA

EXAMINER

HENN, TIMOTHY J

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/693,134

Applicant(s)

SILVERBROOK ET AL.

Examiner

Timothy J Henn

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1,4,5,8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Specification***

2. The disclosure is objected to because of the following informalities: Please fill in the missing application numbers (i.e. "09/\_\_\_\_\_") on pages 1, 2, 4 and 6.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 4 and 5 recite limitations dealing with modulation of the fault tolerant digital data with high frequency spectral signals, which is not described in the specification.

### ***Claim Objections***

4. Claim 1 objected to because of the following informalities: change "date" to "data". Appropriate correction is required.
5. Claim 9 is objected to as being an apparatus claim depending on a method claim. For the purposes of art rejection, claim 9 will be treated as being dependent on claim 7.
6. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The office notes that claim 8 recites the limitation that the invisible ink used to print the fault tolerant digital data is an infra-red ink, however this limitation is already included in independent claim 7.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
8. Claims 4 and 5 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The office notes that the modulation of the fault tolerant digital data with a high

frequency spectral component is not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchta et al. (US 5,164,831) in view of Soscia (US 5,996,893) in further view of Nelson et al. (US 6,191,406).

**[claim 7]**

11. In regard to claim 7, note that Kuchta et al. discloses a camera system for imaging and image including means for outputting the image in a digital form (Column 2, Lines 33-48); the camera including means for inputting an image processing program (Figure 1, Items 20, 22); means for processing the digital format of the image into a transformed image according to the steps of the image processing program (Column 2, Lines 41-44) and storing the transformed image and the original image in a single file (Column 2, Lines 44-48). It can be seen that Soscia lacks means for converting the digital format of the image and the transformed image into a fault tolerant encoded digital form and means for printing the fault tolerant encoded digital form and the image

using an ink jet printing process and the fault tolerant digital form being printed using an infra-red ink.

12. Soscia discloses a printing device which prints a human viewable image with digital data printed over the top in an invisible ink (Figure 3; Column 6, Line 59 – Column 7, Line 14) in order to provide a way to store data associated with a photograph directly on the photograph (Column 1, Lines 30-34). It is noted that although Soscia describes a preferred embodiment which stores audio data on a photograph, he also discloses that other types of information can be stored on the photograph (Column 7, Lines 26-30). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Soscia to print images taken by the camera of Kuchta et al., and to store a digital version of the image and transformed image of Kuchta et al. on the printed photograph, using the system of Soscia.

13. It can further be seen that Kuchta et al. in view of Soscia lacks means for converting the digital format of the transformed image and the original image into a fault tolerant encoded digital form. However, Nelson et al. discloses a photograph with digital data printed over it in invisible ink in which the digital data is encoded in PDF 417, a well known fault tolerant form. It would have been obvious to one of ordinary skill in the art at the time the invention was made to encode the original and transformed image data of Kuchta et al. in PDF417 format as taught by Nelson et al. prior to printing of the photograph to create a printed version of the digital data which is more resilient to physical damage without losing the ability to be read (Official Notice). It is also noted that Nelson et al. discloses the use of infra-red ink for the printing of the secondary

invisible image as a currently preferred embodiment of the ink to be used for printing of the digital data on the photographs (Column 4, Lines 35-44). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use infra-red ink in the printing system of Soscia.

**[claim 8]**

14. In regard to claim 8, note that Nelson et al. discloses the use of invisible infra-red ink (Column 4, Lines 35-44) which inherently has absorption in the infra-red spectrum and negligible absorption in the visible spectrum.

**[claims 1 and 2]**

15. Claims 1 and 2 are method claims corresponding to apparatus claims 7 and 8 respectively. Therefore, claims 1 and 2 are analyzed and rejected as previously discussed with respect to apparatus claims 7 and 8.

**[claim 3]**

In regard to claim 3, note that Nelson et al. discloses the use of PDF417 encoding for the fault tolerant digital data, which, as is well known in the art, uses Reed-Solomon encoding (Official Notice).

**[claim 6]**

16. In regard to claim 6, note that Kuchta et al. in view of Soscia in further view of Nelson et al. discloses a print means that is detachable from the camera (See Soscia, Figure 1). Therefore, it can be seen that Kuchta et al. in view of Soscia in further view of Nelson et al. lacks a print roll means for storing the print media and an ink supply for the printer. The office notes that Soscia discloses that "any one of a plurality of known

digital printers capable of printing on a substrate" (Column 3, Lines 19-21) may be used. It is well known in the art to include ink supply reservoirs in printing devices to store a large amount of ink to be able to print multiple sheets without refilling the printer. It is also well known in the art to store print media in rolls to be able to place a large amount of print media in a small location. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use both an ink supply and a print media roll in the printer of Kuchta et al. in view of Soscia in further view of Nelson et al. to be able to print a large number of pictures without the need to constantly restock the printer (Official Notice).

17. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchta et al. (US 5,164,831) in view of Soscia (US 5,996,893) in further view of Nelson et al. (US 6,191,406) as applied to claim 7 above, and further in view of Sharma et al. (US 5,726,693).

**[claim 9]**

18. In regard to claim 9, note that Kuchta et al. in view of Soscia in further view of Nelson et al. discloses all limitations with the exception of the use of a page width print head using an ink jet structure with a print roll media feeder as the printing means. However, it is noted that Soscia discloses that "any one of a plurality of known digital printers capable of printing on a substrate" (Column 3, Lines 19-21) may be used.

19. Sharma et al. discloses an ink jet page width printing means with feed rollers for moving the print media (Figure 1; Abstract) which provides for a significantly reduced



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energy requirement (Column 4, Lines 25-27). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the printer device of Sharma et al. to reduce the total energy requirement of the system.

### ***Double Patenting***

20. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

21. Claims 1-4 and 6-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,496,654 in view of Kuchta et al. (US 5,164,831).

#### **[claim 1]**

22. 6,496,654 claims a method of printing digital data on a photograph, including the steps of receiving image data corresponding to an image (claim 1, step a), converting the image data into an encoded fault tolerant digital form (claim 1, step b) and printing out the fault tolerant digital form of the image data using an ink jet printing process with an invisible ink on a surface of a print media while simultaneously printing out the image

data as a photographic image representing the image data in a visual, human readable form on the same surface (claim 1, step c). However 6,496,654 does not claim loading an image processing program, transforming the image data into a transformed image and storing or "printing" the original and transformed image data onto the printed photograph.

23. Kuchta et al. teaches the storing of a transformed image, which is created using an image processing program loaded onto a camera, and an original image together to allow quick reading of the transformed image data for review while still maintaining the original high resolution image data (Column 2, Lines 21-32). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to transform the original image using an image processing program and to store the original and transformed image data together on the photograph to allow for fast access and display of the transformed image data, without losing the advantages of keeping original high resolution image data.

**[claim 2]**

24. The office notes that claim 2 is a verbatim copy of claim 4 of 6,496,654.

**[claims 3 and 4]**

25. The office notes that claims 3 and 4 are verbatim copies of claims 2 and 3 of 6,496,654 respectively.

**[claim 6]**

26. The office notes that claim 6 is a verbatim copy of claim 5 of 6,496,654.

**[claim 7]**

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27. In regard to claim 7, note that 6,496,654 claims an apparatus for printing in infra-red ink encoded fault tolerant digital data on a photograph, the apparatus including a camera system for imaging an image and for outputting the image in a digital format (claim 6, item a), means for processing the image data into a fault tolerant encoded digital form (claim 6, item b) and means for printing the image and the fault tolerant encoded digital form using an ink jet printing process, the fault tolerant encoded digital form being printed using an infra-red ink (claim 6, item c). However 6,496,654 does not claim loading an image processing program, transforming the image data into a transformed image and storing or "printing" the original and transformed image data onto the printed photograph.

28. Kuchta et al. teaches the storing of a transformed image, which is created using an image processing program loaded onto a camera, and an original image together to allow quick reading of the transformed image data for review while still maintaining the original high resolution image data (Column 2, Lines 21-32). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to transform the original image using an image processing program and to store the original and transformed image data together on the photograph to allow for fast access and display of the transformed image data, without losing the advantages of keeping original high resolution image data.

**[claim 8]**

29. In regard to claim 8, the office notes that 6,496,654 claims the use of infra-red ink (claim 6, item c).

**[claim 9]**

30. The office notes that claim 9 is a verbatim copy of claim 7 of 6,496,654.

31. Claims 1-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 09/693,083 in view of Kuchta et al. (US 5,164,831).

**[claim 1]**

32. 09/693,083 claims a method for printing digital data on a photograph comprising the steps of receiving image data corresponding to an image (claim 1, step a), loading an image processing program (claim 1, step b), transforming the image data using the image processing program (claim 1, step c), converting image and image related data into a fault tolerant digital form (claim 1, step e) and printing out the fault tolerant digital data using an ink jet printing process with an invisible ink on a surface of a print media while simultaneously printing out image data as a photographic image in a visual, human readable form on the same surface of the print media (claim 1, step f).

Therefore, it can be seen that 09/693,083 lacks a method which encodes a fault tolerant copy of the original image data and the transformed image data, and prints this fault tolerant encoded data on a photographic printed version of the original image data.

33. Kuchta et al. teaches the storing of a transformed image, which is created using an image processing program loaded onto a camera, and an original image together to

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allow quick reading of the transformed image data for review while still maintaining the original high resolution image data (Column 2, Lines 21-32). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to transform the original image using an image processing program and to store the original and transformed image data together on the photograph to allow for fast access and display of the transformed image data, without losing the advantages of keeping original high resolution image data. The office also notes that it is well known in the art when printing image data to use the highest resolution available to obtain a better photographic print (Official Notice). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to print the original image data as the photographic printed version to obtain a better quality picture.

**[claims 2-6]**

34. The office notes that claims 2-6 of 09/693,083 are verbatim copies of claims 2-6 of the present application.

**[claim 7]**

35. In regard to claim 7, note that 09/693,083 claims an apparatus for printing in invisible ink encoded fault tolerant digital data on a photograph, the apparatus including a camera system for imaging an image including means for outputting the image in a digital format, the camera including means for inputting an image processing program (claim 7, item a), means for processing the digital format of the image into a transformed version of the image in accordance with the steps of the image processing program (claim 7, item b), means for converting the digital format of the image and other

image related data into a fault tolerant form (claim 7, item c) and means for printing on a surface the transformed version of the image and the fault tolerant encoded digital form using an ink jet printing process, the fault tolerant encoded digital form being printed using an infra-red ink (claim 7, item d). Therefore, it can be seen that 09/693,083 lacks an apparatus which encodes a fault tolerant copy of the original image data and the transformed image data, and prints this fault tolerant encoded data on a photographic printed version of the original image data.

36. Kuchta et al. teaches the storing of a transformed image, which is created using an image processing program loaded onto a camera, and an original image together to allow quick reading of the transformed image data for review while still maintaining the original high resolution image data (Column 2, Lines 21-32). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to transform the original image using an image processing program and to store the original and transformed image data together on the photograph to allow for fast access and display of the transformed image data, without losing the advantages of keeping original high resolution image data. The office also notes that it is well known in the art when printing image data to use the highest resolution available to obtain a better photographic print (Official Notice). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to print the original image data as the photographic printed version to obtain a better quality picture.

**[claims 8-9]**

37. The office notes that claims 8 and 9 of 09/693,083 are verbatim copies of claims 8 and 9 of the present application.

This is a provisional obviousness-type double patenting rejection.

### ***Allowable Subject Matter***

38. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **[claims 4 and 5]**

39. In regard to claims 4 and 5, the prior art does not teach or fairly suggest the modulation of a fault tolerant encoded data signal with a high frequency spectral component before printing of the fault tolerant encoded data. However, the allowance of claims 4 and 5 may be revisited pending any amendments made to overcome 35 U.S.C. §112 rejections.

### ***Conclusion***

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art describes some of the features of the PDF417 format:

i. Maltsev

US 5,716,219

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The following prior art further shows the current state of the art in printing in visible and invisible inks:

- |      |                 |              |
|------|-----------------|--------------|
| ii.  | Maruyama et al. | US 5,547,501 |
| iii. | McIntyre et al. | US 6,102,505 |

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (703) 305-8327. The examiner can normally be reached on M-F 7:30 AM - 5:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TJH



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